

UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Group: Attorney Docket # 1987

Applicant(s) : SCHMID, R.

Serial No. :

Filed :

For : METHOD AND APPARATUS FOR CLEANING
VEHICLE WINDOWS

SIMULTANEOUS AMENDMENT

March 8, 2002

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

S I R S:

Simultaneously with filing of the above identified application
please amend the same as follows:

In the Claims:

Cancel all claims without prejudice.

Substitute the claims attached hereto.

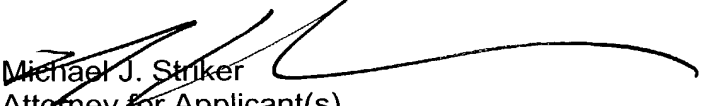
REMARKS:

This Amendment is submitted simultaneously with filing of the above identified
application.

With the present Amendment applicant has amended the claims so as to eliminate
their multiple dependency.

Consideration and allowance of the present application is most respectfully
requested.

Respectfully submitted,


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Claims

1. A method for cleaning vehicle windows by means of a wiper with a wiper strip (12), whose wiper lip (16) rests against the vehicle window, characterized in that the
5 wiper strip (12) is set into oscillations lateral to its longitudinal direction (20) during the wiping operation and/or shortly before it is begun.
2. The method according to claim 1, characterized in that the oscillations have a frequency in the ultrasonic range.
- 10 3. The method according to claim 1 [or 2], characterized in that the oscillations are generated by piezoelectric elements (10).
4. The method according to [one of the preceding claims] claim 1, characterized
15 in that washing water is applied to the vehicle window close to the wiper strip (12) during the wiping operation.
5. An apparatus for executing a method according to [one of the preceding claims] claim 1, characterized in that piezoelectric elements (10) are disposed parallel to the
20 wiper strip (12), which act on a wiper blade rubber (14) in the wiping direction (24) and are controlled by an electronic control unit (30).
6. The apparatus according to claim 5, characterized in that the piezoelectric elements (10) are supported in a flexible support (18) perpendicular to the vehicle
25 window.
7. The apparatus according to claim 6, characterized in that the support (18) of the piezoelectric elements (10) is formed onto a profiled back (28) of the wiper blade rubber (14).

8. The apparatus according to [one of claims 5 to 7] claim 5, characterized in that when the wiper is first actuated after the vehicle has been parked and/or at outside temperatures below freezing, the control unit (30) activates the piezoelectric elements (10) before activating the wiping operation.

Claims

1. A method for cleaning vehicle windows by means of a wiper with a wiper strip (12), whose wiper lip (16) rests against the vehicle window, characterized in that the
5 wiper strip (12) is set into oscillations lateral to its longitudinal direction (20) during the wiping operation and/or shortly before it is begun.
2. The method according to claim 1, characterized in that the oscillations have a frequency in the ultrasonic range.
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3. The method according to claim 1, characterized in that the oscillations are generated by piezoelectric elements (10).
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4. The method according to claim 1, characterized in that washing water is applied to the vehicle window close to the wiper strip (12) during the wiping operation.
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5. An apparatus for executing a method according to claim 1, characterized in that piezoelectric elements (10) are disposed parallel to the wiper strip (12), which act on a wiper blade rubber (14) in the wiping direction (24) and are controlled by an electronic control unit (30).
25
6. The apparatus according to claim 5, characterized in that the piezoelectric elements (10) are supported in a flexible support (18) perpendicular to the vehicle window.
30
7. The apparatus according to claim 6, characterized in that the support (18) of the piezoelectric elements (10) is formed onto a profiled back (28) of the wiper blade rubber (14).
8. The apparatus according to claim 5, characterized in that when the wiper is first actuated after the vehicle has been parked and/or at outside temperatures below freezing,

